

ABSTRACT OF THE DISCLOSURE

Modifications to the 2-stage interconnection to allow flexible scalability.

Different switching fabrics having a range of different sizes can be constructed out of the same set of I/O switching nodes through this modified 2-stage interconnection, which can

- 5 further be recursively invoked to construct large switching fabrics with desirable sizes. The recursive construction incorporating the modified 2-stage interconnection can seamlessly be realized through the five hierarchical levels of physical implementation, including inside-chip implementation, PCB implementation, orthogonal packaging, interface-board packaging and fiber-array packaging. The routability of the resulting switching fabric is
- 10 always guaranteed and self-routing mechanism is also pertained.